Self Erect Cranes

Used Self Erect Cranes South Carolina - The tower crane's base is usually bolted to a huge concrete pad which provides really necessary support. The base is connected to a tower or a mast and stabilizes the crane that is attached to the inside of the building's structure. Normally, this attachment point is to a concrete lift or to an elevator shaft. Usually, the mast is a triangulated lattice structure measuring 10 feet square or 0.9m2. The slewing unit is attached to the very top of the mast. The slewing unit consists of a motor and a gear that allows the crane to rotate. Tower cranes are able to have a maximum unsupported height of 80m or two hundred sixty five feet. The tower crane's maximum lifting capacity is sixteen thousand six hundred forty two kg or thirty nine thousand six hundred ninety pounds with counter weights of 20 tons. Furthermore, two limit switches are utilized to be able to ensure the driver does not overload the crane. There is also another safety feature called a load moment switch to make sure that the operator does not exceed the ton meter load rating. Lastly, the maximum reach of a tower crane is two hundred thirty feet or 70 meters. Because of their extreme heights, there is a science involved to erecting a crane. The stationary structure will at first need to be brought to the construction location by using a huge tractor-trailer rig setup. Then, a mobile crane is utilized so as to assemble the equipment portion of the jib and the crane. Afterwards, these parts are attached to the mast. Then, the mobile crane adds counterweights. Crawler cranes and forklifts can be some of the other industrial machines which is typically utilized to erect a crane. As the building is erected, mast extensions are added to the crane. This is how the crane's height is able to match the building's height. The crane crew uses what is referred to as a climbing frame or a top climber which fits between the top of the mast and the slewing unit. A weight is hung on the jib by the work crew so as to balance the counterweight. When complete, the slewing unit could detach from the top of the mast. In the top climber, hydraulic rams are used to adjust the slewing unit up an additional 6.1m or 20 feet. Next, the driver of the crane uses the crane to insert and bolt into place another mast section piece.